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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,923	02/01/2006	Kaoru Tada	Brazing3PCTMinori	1171

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EXAMINER	
SAVAGE, JASON L	
ART UNIT	**PAPER NUMBER**
1794	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/566,923	TADA ET AL.	
	Examiner	Art Unit	
	JASON L. SAVAGE	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20060201*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites a part for brazing made of a ceramic *to be used at the time of brazing*…. The claim limitations following 'to be used' read as an intended use that at some future time would be treated with a powder of the active metal and binder for use in a brazing process. It is not clear if Applicant intends for the part to merely be a ceramic or if the other limitations such as a powder of active metal being stuck by a binder to the part. Since the scope of the claim is not sufficiently clear, that claim is considered indefinite. The claim has been interpreted as being drawn to a part which is made of ceramic.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3 5-6 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of copending Application No. 10/565,330. Although the conflicting claims are not identical, they are not patentably distinct from each other because Application'330 recites an active binder for brazing comprising an active metal such as titanium or zirconium are mixed (claim 1). Regarding claim 3, Application'330 further recites a ceramic part (claim 1). Regarding claims 5-6, Application'330 recites a brazed product obtained by brazing a metal part and a ceramic part wherein a binder containing an active metal of titanium or zirconium and a brazing powder of silver are spread and firmly deposited between the ceramic and metal part (claim 1). Application'330 further recites the metal part is copper, the ceramic may be aluminum nitride or silicon nitride (claim 3).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakahashi et al. (US 4,917,642).

Nakahashi teaches an active binder for brazing comprising an active metal powder such as Ti and water-based binder such as polyvinyl alcohol or ethyl cellulose (col. 6, ln. 19-46).

Regarding claim 3, Nakahashi teaches a ceramic part such as aluminum nitride or silicon nitride (col. 6, ln. 60-68).

Regarding claim 5, Nakahashi teaches a brazed product obtained by brazing a metal part and a ceramic part wherein a binder containing an active metal of titanium or zirconium and a brazing powder of silver are spread and firmly deposited between the ceramic and metal part (col. 5, ln. 31-67).

Regarding claim 7, Nakahashi teaches that the silver brazing material may be provided as a foil (col. 7, ln. 11-26). As such, Nakahashi would meet the claim limitation of a silver foil braze having a powder of active metal and binder formed adjacent thereto.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Sato et al. (JP 09-185452 English Machine Translation).

Regarding claims 1-2, Sato teaches an active binder for brazing comprising an active metal powder or hydride thereof such as Ti (par[0017) and a water-based binder such as ethyl or methyl cellulose (par[0023]).

Regarding claims 3-4, Sato teaches a ceramic part such as aluminum nitride having a titanium hydride active metal and binder firmly suck to the surface of the ceramic part (abs).

Regarding claims 5-6, Sato teaches a brazed product obtained by brazing a copper metal part and an aluminum nitride ceramic part wherein a binder containing an active metal of titanium and a brazing powder of silver are spread and firmly deposited between the ceramic and metal part (abs). As recited above, the binder of Sato may be water-based (par[0023]).

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Mabuchi et al. (JP 11-092809 English Machine Translation).

Regarding claims 1-2, Mabuchi teaches an active binder for brazing comprising an active metal powder or hydride thereof such as Ti (par[0017) and a water-based binder such as ethyl or methyl cellulose (par[0021]).

Regarding claims 3-4, Mabuchi teaches a ceramic part such as aluminum nitride has a titanium hydride active metal and binder firmly suck to the surface of the ceramic part (par[0017] and [0021]).

Regarding claims 5-6, Mabuchi teaches a brazed product obtained by brazing a copper metal part and an aluminum nitride ceramic part (par[0006]) wherein a binder containing an active metal of titanium and a brazing powder of silver are spread and firmly deposited between the ceramic and metal part (abs). As recited above, the binder of Mabuchi may be water-based (par[0021]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 4, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakahashi et al. (US 4,917,642).

Regarding claims 2, 4 and 8, Nakahashi teaches the claim limitations but is silent to the active metal being provided as a hydride, it is known in the art to provide the active metal material in the form of metal powder or as a hydride. As such, it would have been obvious to one of ordinary skill in the art to have provided the active metal in the form of a metal hydride with a reasonable expectation of success.

Regarding claim 6, Nakahashi teaches aluminum and silicon nitride ceramics and silver brazing filler (col. 47-68). However Nakahashi does not exemplify an embodiment wherein the metal part is copper. However, it would have been obvious to one of ordinary skill in the art to have used a conventional metal part material such as copper with a reasonable expectation of success.

Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable Sato et al. (JP 09-185452 English Machine Translation).

Regarding claims 7-8, Sato does not exemplify an embodiment wherein the silver brazing material may be provided as a foil. However, applying brazing material in the form of powder or foil are well known and equivalent methods of providing braze materials. As such, it would have been obvious to one of ordinary skill in the art to have provided the silver braze in the form of a foil.

Regarding claim 8, Sato teaches the active metal my be titanium hydride (abs).

Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable Mabuchi et al. (JP 11-092809 English Machine Translation).

Regarding claims 7-8, Mabuchi does not exemplify an embodiment wherein the silver brazing material may be provided as a foil. However, applying brazing material in the form of powder or foil are well known and equivalent methods of providing braze materials. As such, it would have been obvious to one of ordinary skill in the art to have provided the silver braze in the form of a foil.

Regarding claim 8, Sato Mabuchi the active metal my be titanium hydride (par[0017]).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON L. SAVAGE whose telephone number is (571)272-1542. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Savage/
6-22-08

/KEITH D. HENDRICKS/
Supervisory Patent Examiner, Art Unit 1794